

# HPE Data Replication Solution Service for HPE 3PAR Virtual Copy

## HPE Lifecycle Event Services

HPE Data Replication Solution Service for 3PAR Virtual Copy provides implementation of the HPE 3PAR Storage System's Virtual Copy product. This service provides the analysis, design, implementation, and testing services necessary to deploy Virtual Copy functionality.

Virtual Copy provides enhanced availability and disaster recovery protection. To help ensure a timely, cost-effective deployment that reduces risk and shortens your time to results, Hewlett Packard Enterprise service professionals efficiently handle the entire gamut of complex implementation tasks. The service is offered at three service levels, ranging from installation and startup through comprehensive implementation tailored to address the specific needs of your storage environment.

The Level I service is designed to help you get 3PAR Virtual Copy up and running quickly and to provide a demonstration of the product's key features using sample or test data only.

The Level II service provides implementation and testing of the Virtual Copy configuration using volumes you designate and verifies operation of the designated volumes with one application that you manage.

The Level III service is a tailored service based on a Statement of Work (SOW) created by Hewlett Packard Enterprise that addresses your organization's unique requirements not addressed by Level I and II services. The Level III service can accommodate verification of more than one application you have configured; scripting; or integration and configuration by HPE of your applications, backup environment, or databases.

### Service benefits

- Installation of Virtual Copy in accordance with product specifications (Level I) and your organization's configuration requirements (Levels II and III)
- Service delivered by a trained specialist and based upon Hewlett Packard Enterprise recommended configurations and industry best practices
- Your IT staff can stay focused on their core tasks and priorities, resulting in less impact on your business
- Hewlett Packard Enterprise's expertise with data replication helps ensure that issues are avoided and risks are reduced
- Service scheduling and coordination are provided to manage the implementation of the service
- A Hewlett Packard Enterprise service specialist is available to answer questions during the on-site delivery of the service
- Custom solution implementation and project management are provided, as detailed in the SOW (Level III only)

### Service feature highlights

- Service planning
- Service deployment
- Installation verification tests (IVT)
- Customer orientation session
- Project management (Level III only)

## Specifications

**Table 1.** Service features

Feature	Delivery specifications
<b>Service planning</b>	<p>A Hewlett Packard Enterprise service specialist or project manager will schedule the delivery of the service at a time mutually agreed upon between HPE and the Customer, which shall be during local HPE standard business hours excluding HPE holidays, unless otherwise agreed by HPE. Any services provided outside of HPE standard business hours may be subject to additional charges.</p> <p>The service specialist will perform the following installation planning and coordination activities:</p> <ul style="list-style-type: none"> <li>• Schedule and coordinate the service</li> <li>• Communicate with the Customer, including handling queries from the Customer regarding service delivery</li> <li>• Verify, using a predelivery checklist, that all service prerequisites that the Customer is responsible for have been met</li> <li>• Collect preliminary documentation for the installation report on the array, volumes, and hosts involved; volumes may be virtual (snapshots) or physical copies, as designated by the Customer</li> </ul> <p>Level I provides the planning activities associated with working through the prerequisites of installing Virtual Copy and identifying the volumes that will be used for testing.</p> <p>Level II contains the deliverables of the Level I service, plus the planning activities to identify and configure the copy space(s) and customer-designated virtual volumes for a single customer application.</p> <p>Level III may include planning deliverables of the Level I and II services in addition to any requirements specified by the Customer and documented in the SOW.</p>
<b>Service deployment</b>	<p>Level I deployment activities include:</p> <ul style="list-style-type: none"> <li>• Reviewing the engagement with the Customer using the predelivery checklist and verifying that all service prerequisites have been met</li> <li>• Activating Virtual Copy licensing using a command-line interface (CLI), as applicable</li> <li>• Implementing a sample Virtual Copy job using test or sample data limited to 500 GB or less</li> <li>• Documenting in the installation report the Virtual Copy implementation as is has been configured in the Customer's environment</li> </ul> <p>Level II deployment activities include:</p> <ul style="list-style-type: none"> <li>• Examining application and virtual volumes with the Customer to determine the specific configuration parameters required for the Customer's chosen application</li> <li>• Configuring the snapshot copy space and virtual copies for the Customer-designated virtual volumes based upon results of the application examination</li> <li>• Documenting the Customer's Virtual Copy environment</li> </ul> <p>Level III deployment activities will be defined by a Statement of Work created for the Customer. It may contain or leverage elements of Level I or Level II activities and/or other deliverables based upon the Customer's needs. Activities are defined by the specific SOW, but may include:</p> <ul style="list-style-type: none"> <li>• Assessment, design, and deployment of Virtual Copy with virtual volumes corresponding to multiple applications</li> <li>• Scripting or integration of Virtual Copy with Hewlett Packard Enterprise or third-party application functions</li> <li>• Overall project management</li> <li>• Implementation of a customized configuration</li> <li>• Customized deployment, documentation, and test plans</li> <li>• Additional or incremental deliverables requested by the Customer</li> </ul>
<b>Installation verification tests (IVT)</b>	<p>The IVT will be performed with the Customer's system administrator using replication jobs. It will be followed by comprehensive testing on the sample or designated volumes, which will verify the operation of Virtual Copy volumes.</p> <p>Level I testing activities include:</p> <ul style="list-style-type: none"> <li>• Demonstrating and verifying the operation of common Virtual Copy functions (volume copy creation, promotion, and deletion for virtual copies; volume copy creation, resynchronization, promotion, and deletion for physical copies) of sample volumes on a source server</li> <li>• Exporting sample volumes to a target server with the same OS and verifying data accessibility</li> </ul> <p>Level II testing activities include Level I activities, plus:</p> <ul style="list-style-type: none"> <li>• Demonstrating and verifying common Virtual Copy functions (to protect source data; copy promotion is not tested) on the designated volumes of one Customer application on source server(s)</li> <li>• Exporting designated volumes for one Customer application to the target server(s) with the same OS and verifying data accessibility</li> </ul> <p>The installation verification test (IVT) will be performed with the assistance of the Customer's system or application administrator.</p> <p>In lieu of an IVT, the Level III service will include acceptance testing to validate those features and functions requested in the SOW.</p>

Table 1. Service features (continued)

Feature	Delivery specifications
<b>Customer orientation session</b>	<p>One orientation session of up to two hours' duration will be provided at the installation site on the product and/or technology. During this process, the Hewlett Packard Enterprise service specialist will:</p> <ul style="list-style-type: none"> <li>• Highlight the basic operations of Virtual Copy software</li> <li>• Familiarize the Customer with Inform Management Console (IMC) and CLI</li> <li>• Review the installation report and configuration details with the Customer, as implemented</li> <li>• Confirm that the Customer is aware of how to obtain service documentation and support</li> <li>• Hold a brief question-and-answer forum with the Customer</li> </ul> <p>The orientation session is informal, is typically conducted at a management console with selected members of the Customer's staff, and is not intended as a classroom activity or substitute for formal product training. The Customer's participation in the product deployment and installation verification testing is a key component of the orientation session.</p>
<b>Project management (Level III only)</b>	<p>The project manager will work with the Customer to manage the integration, development, and delivery of the service during HPE standard business hours. The project manager will provide the activities detailed below, either remotely or on-site (at the discretion of Hewlett Packard Enterprise).</p> <p>The project manager will:</p> <ul style="list-style-type: none"> <li>• Develop a project plan, based on the SOW, which defines the scope of the service to be delivered</li> <li>• Identify the Customer's responsibilities and other requirements in order to facilitate the delivery of this service</li> <li>• Act as the liaison and single point of contact between Hewlett Packard Enterprise and the Customer</li> <li>• Develop the project schedule and manage the project against defined timelines</li> <li>• Manage any Hewlett Packard Enterprise resources required for the delivery of the service</li> </ul>

## Service eligibility

The Customer must meet certain hardware and software prerequisites prior to delivery of the service. These prerequisites include, but are not limited to, the following:

- Ensure that an operational, Hewlett Packard Enterprise supported, and Virtual Copy compatible 3PAR storage environment is in place, at firmware revision levels specified by HPE
- Provide access to the 3PAR management interface
- Provide operational management stations with connectivity to the 3PAR storage system that meet the minimum requirements of Virtual Copy and 3PAR management software
- Install any recommended host- or SAN-based software upgrades, patches, device drivers, or multipathing software
- Ensure that applications to be configured with Virtual Copy are installed, configured, and operational; that application server(s) are in a supported configuration; and that application data resides on the 3PAR storage system

## Service limitations

Unless specified in this document or in a separate Statement of Work, activities such as, but not limited to, the following are excluded from this service:

- For Level I, configuration of Virtual Copy with more than 500 GB of test data, with the Customer's production data, or with more than two servers running more than a single operating system
- For Level II, configuration of Virtual Copy with more than one Customer-designated application
- Any implementation of applications or products that integrate with Virtual Copy via APIs (e.g., SAP®, HPE Data Protector) or extensive customer-specific scripting (unless provided for in the SOW)
- Planning, design, implementation, or assessment of the Customer's overall SAN or fabric architecture
- Any documentation other than that mentioned in this data sheet
- Inform OS upgrades required for the supported version of Virtual Copy
- Implementation of software revisions, including hot fixes, patches, service packs, or upgrades from prior versions, on the Customer's existing SAN, host, and application environment
- Integration with any hardware or software components not supported by Virtual Copy
- Configuration, consulting, and training for optional HPE 3PAR software such as HPE 3PAR Adaptive Optimization, Dynamic Optimization, MPIO, Policy Manager, Recovery Manager, System Reporter, System Tuner, Remote Copy, and Virtual Domains; separate services are available for these products
- Installation or configuration of any hardware or software products other than Virtual Copy including, but not limited to, servers, host operating systems, host agent software, multipathing software, tape libraries, host bus adapters, network, SAN fabric, Enterprise Backup software, and Recovery Manager software
- Operational testing of applications or troubleshooting of interconnectivity, network, compatibility, or problems not related to Virtual Copy
- Performance testing or modeling
- Loading, management, or manipulation of the Customer's data
- Migration of existing data to a new array or to a new configuration within an existing array
- Design or implementation of high-availability and other complex configurations, such as host clustering
- Design or implementation of host-based logical volume managers and associated file system structures
- Any services not clearly specified in this document or in an associated Statement of Work

## Customer responsibilities

The Customer will:

- Contact a Hewlett Packard Enterprise service specialist to schedule delivery within 90 days of date of purchase of the service
- Ensure that all service prerequisites as identified in the “Service eligibility” section have been met
- Assign a designated person from the Customer’s staff who, on behalf of the Customer, will grant all approvals; provide information; ensure that all hardware, firmware, and software that the HPE service specialist will need in order to deliver this service are available and that software products are properly licensed; and otherwise be available to assist HPE in facilitating the delivery of this service
- Complete and return the prerequisite HPE predelivery checklist to the service specialist at least two weeks prior to the start of the service, including array configuration information, as necessary
- Ensure that the latest IMC and CLI versions are installed and operational
- Ensure that any and all prerequisite Inform OS, firmware, or driver dependencies for the environment are completed before on-site service delivery begins
- Ensure that prerequisite volume capacity is available in the 3PAR storage system to support the Virtual Copy implementation
- Ensure the availability, at all times during service delivery, of one or more individuals who will provide administrator-level access to the systems where the work is to be performed
- Assume responsibility for access to and manipulation of the application(s) related to the implementation of the Virtual Copy software, unless otherwise specified in a Level III Statement of Work
- Be responsible for all data backup and restore operations
- Allow HPE full and unrestricted or escorted access to all locations where the service is to be delivered
- Provide a suitable work area for delivery of the service, including access to an outside telephone line, power, and any network connections required
- Perform other reasonable activities to help HPE identify or resolve problems, as requested by HPE

## General provisions/Other exclusions

- HPE reserves the right to re-price this service if the Customer does not schedule and provide for subsequent delivery within 90 days of purchase.
- HPE reserves the right to charge, on a time and materials basis, for any additional work over and above the service package pricing that may result from work required to address service prerequisites or other requirements that are not met by the Customer.
- HPE’s ability to deliver this service is dependent upon the Customer’s full and timely cooperation with HPE, as well as the accuracy and completeness of any information and data the Customer provides to HPE.
- Portions of the service are delivered remotely or on-site, at HPE’s discretion.
- The service is delivered during HPE standard business hours. Service delivery outside these hours is available at additional cost.
- The service is delivered as a single, contiguous event. Environments that require multiple engagements over a longer period of time are not included with this service and are available at additional cost.
- Travel charges may apply; please consult your local office.

Activities such as, but not limited to, the following are excluded from this service:

- Service required due to causes external to the HPE maintained hardware or software
- Service deployment on hardware not covered by a Hewlett Packard Enterprise warranty or service maintenance contract
- Services that, in the opinion of HPE, are required due to unauthorized attempts by non-HPE personnel to install, repair, maintain, or modify hardware, firmware, or software
- Service deployment on hardware covered by an unauthorized third-party maintenance contract
- Any services not clearly specified in this document

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4AA3-8107ENW, May 2017, Rev. 1